REMARKS

Applicant appreciates the thorough examination of the present application as evidenced by the final Office Action of January 6, 2011 (hereinafter "Final Action"). In response, Applicant has amended Claim 10 to remove the recitations of "transposing frequency data in the music score file to a higher frequency range," to clarify that the music file recited therein is modified by replacing a specification of an instrument provided in the music score file for the identified audio data with a substitute specification of an instrument having brighter timbre. No new matter has been added.

Accordingly, Applicant respectfully requests further consideration of the pending claims and allowance of the present application for at least the reasons that follow.

Status of the Claims

Claims 1-16 stand rejected under 35 USC §103(a) as being unpatentable over U.S. Patent Application Publication No. 2001/0049994 to Wachi et al. ("Wachi") in view of U.S. Patent No. 5,590,282 to Clynes ("Clynes").

Independent Claims 1 and 10 Are Patentable Over Wachi and Clynes

Independent Claims 1 and 10 stand rejected under 35 USC §103(a) as being unpatentable over Wachi in view of Clynes. *See* Final Action, Pages 2-5. Claim 10, for example, recites:

> 10. An apparatus for rendering sampled data from a music file according to a transmission characteristic of a loudspeaker of a mobile terminal of a wireless communication system, the apparatus comprising:
>
> storage means for storing the music file and data related to transmission characteristics of one or more loudspeakers,
>
> selection means for selecting data for a particular loudspeaker from the storage means,
>
> low frequency sound identification means for identifying audio data in the music file which represent a sound with a spectral component below a transmission frequency range of the particular loudspeaker corresponding to the selected data,
>
> control means for controlling a modification of a sound reproduction from the identified audio data such that the modified sound reproduction yields a sound spectrum having an increased energy content within the transmission frequency range of the particular loudspeaker as compared to a sound spectrum of an unmodified sound reproduction; and
>
> synthesizing means for synthesizing sampled data from a modified music file,

> wherein the music file is a music score file, and **wherein the control means modifies the music score file** to provide the modified music file **by replacing a specification of an instrument provided in the music score file** for the identified audio data **with a substitute specification of an instrument having brighter timbre**. (*Emphasis added*).

However, Wachi and Clynes fail to disclose or suggest several of the recitations of Claim 10. For example, the cited references do not disclose or suggest "**replacing a specification of an instrument provided in the music score file...with a substitute specification of an instrument having brighter timbre**," as recited by Claim 10.

In particular, the Final Action concedes that Wachi does not disclose a music score file. *See* Final Action, Page 4. Thus, Wachi necessarily does not disclose or suggest a specification of a particular instrument in such a music score file, nor replacing such an instrument specification "with a substitute specification of an instrument having brighter timbre," as recited by Claim 10.

Nor does Clynes disclose or suggest these recitations. Clynes describes a system where a user can access a library of stored music scores, and can create his own 'microscore' to be imparted to the notes of a selected music score to create a personally meaningful or expressive performance. *See* Clynes, Abstract and Col. 4, lines 53-61. In particular, Clynes notes that a user can use a user interface to "[s]witch the instruments that play" in a music score. *See* Clynes, Col. 5, line 60. However, generally disclosing the ability to switch instruments in a score based on a user's preferences, as described in Clynes, does not necessarily disclose or suggest replacing a specification of an instrument with that of an instrument having a brighter timbre. Indeed, the user's preference may indicate an instrument having a lower timbre, such that the instrument originally specified in the music score may be switched with an instrument having a lower timber. Thus, even if combined, the cited references do not disclose or suggest replacing a specification of an instrument "with a substitute specification of an instrument having a brighter timbre," as recited by Claim 10.

Furthermore, as stated in the MPEP, "rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." MPEP §2142 (*citations omitted*). However, the Final Action asserts that it would be obvious to incorporate the music scores described in Clynes with the apparatus of Wachi "for purpose of rendering

the music scores meaningful and expressive" (Final Action, Page 4), which merely repeats a stated goal of Clynes (*see* Clynes, Col. 4, lines 10-11). Thus, as the Final Action provides no line of reasoning as to why one of ordinary skill in the art would combine the teachings of Wachi (which is concerned with generating tones based on the dynamic range of a selected sound system) with those of Clynes (which is concerned with allowing a user to create expressive music), Applicant respectfully submits that the Final Action's rationale is exactly the type of conclusory reasoning prohibited by MPEP §2142.

For at least these reasons, Applicant submits that the Final Action has failed to establish a *prima facie* case of obviousness, and that Claim 10 is therefore patentable over the cited references. Claim 1 includes method recitations corresponding to the apparatus of Claim 10, and is thus patentable for at least similar reasons. Also, dependent Claims 2, 3, and 11-14 and 16 are patentable at least per the patentability of Claims 1 or 10 from which they depend.

Independent Claim 4 Is Patentable Over Wachi and Clynes

Independent Claim 4 also stands rejected under 35 USC §103(a) as being unpatentable over Wachi in view of Clynes. *See* Final Action, Page 5. Claim 4 recites, in part:

> modifying a sound reproduction of the identified audio data such that the modified sound reproduction yields a sound spectrum having an increased energy content within the transmission frequency range of the loudspeaker as compared to a sound spectrum of an unmodified sound reproduction,
>
> wherein the music file is a music score file, and wherein the modified sound reproduction is based on a **transposition of frequency data in the music score file to a higher frequency range**. (*Emphasis added*).

Applicant submits that the cited references fail to disclose or suggest at least such a "**transposition of frequency data in the music score file to a higher frequency range**," as recited by Claim 4.

The Final Action relies on Wachi as disclosing these recitations in its discussion of setting a frequency (240Hz) higher than the lowest frequency (120Hz) of a sound system as a pseudo low tone start frequency. *See* Final Action, Page 4. However, Wachi describes that, if a pitch designated in a sounding instruction is lower than a critical pitch associated with a

speaker, a second waveform signal (including at least two overtones that are higher than the critical pitch) is generated to provide a "pseudo" low tone; otherwise, a first waveform signal containing a tone corresponding to the designated pitch is generated. *See* Wachi, Abstract. More particularly, in generating the pseudo low tone, Wachi notes that "the first waveform signal and the second waveform signal are mixed with each other to provide the music tone containing the pseudo low tone." Wachi, Paragraph 0008 (*underline added*). *See also* Wachi, Paragraphs 0009 to 0014. Accordingly, in Wachi, the generated overtones included in the second waveform signal are mixed with the first waveform signal, which does not disclose or suggest transposing frequency data to a higher frequency range. Nor does the Final Action rely on Clynes as disclosing these recitations. *See* Final Action, Page 4.

Thus, Applicant submits that the Final Action has failed to establish a *prima facie* case of obviousness based on the combination of Wachi and Clynes, and that Claim 4 is patentable for at least the above reasons. Dependent Claims 5-9 and 15 are also patentable at least per the patentability of Claim 4 from which they depend.

Many of the Dependent Claims Are Separately Patentable

Applicant further submits that several of the dependent claims contain separate bases for patentability. For example, Claim 16 recites that the music score file is modified "**by transposing an entirety of the frequency data in the music score file to a higher frequency range.**" As described in greater detail the present specification, "the score is adapted as a whole to the transmission characteristic of a small size loudspeaker by transposing it upwards by a certain frequency interval...[b]y transposing the music score upwards, all or at least nearly all frequencies in the sound spectrum are shifted upwards into the frequency range of the small size loudspeaker." Specification, Page 10, lines 13-19 (*underline added*).

The Final Action asserts that Wachi discloses these recitations in its discussion of pseudo low tone control data. *See* Final Action, Pages 7-8. However, while Wachi may describe generating a "pseudo" low tones (including higher pitch overtones) for particular music tones that designate a pitch below the critical pitch of a speaker (*see* Wachi, Abstract), and providing sets of pseudo low tone control data corresponding to different lowest frequencies (from which a user can select based on the critical frequency of a particular sound system 12 or 112) (*see* Wachi, Paragraphs 0152 and 0278), Wachi does not disclose or

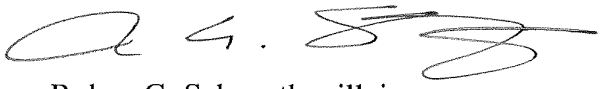
suggest transposing an entirety of the frequency data in a music file to a higher frequency range. Rather, as noted in Wachi, "when a user specifies a critical frequency of a sound system 112 in advance, the pseudo low tone control data which matches with that lowest frequency can thereafter be automatically selected to be used by simply effecting the operation for selecting a timbre." Wachi, Paragraph 0278 (*underline added*). Thus, while Wachi may describe generating a higher-pitch waveform for particular low-frequency tones that are lower than the critical frequency of a specified sound system, Wachi does not disclose or suggest transposing all of the frequency data in a music score file to a higher frequency. Nor does the Final Action rely on Clynes as disclosing these recitations.

Accordingly, Applicant submits that Claim 16 is separately patentable for at least these reasons. Claim 15 includes similar recitations, and is thus patentable for at least similar reasons.

Conclusion

Accordingly, based on the above amendments and remarks, Applicant submits that the pending claims are now in condition for allowance. Thus, Applicant respectfully requests allowance of these claims and passing the application to issue. Applicant encourages the Examiner to contact the undersigned to resolve any remaining issues.

Respectfully submitted,



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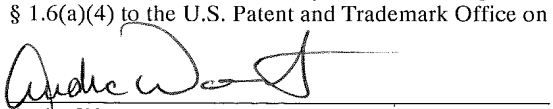

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